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Extracted from the
American Journal of the Medical Sciences, for February, 1889.

ALVEOLAR SARCOMA OF TONSIL.

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OCTOBER 20, 1887, Charles M., aged six years, suffering with slight soreness of the throat, was brought to Dr. P. R. Hardee, of Moriah, N. C., who upon examination found a small and insignificant-looking ulcer in the centre of the right tonsil; it was seemingly so trivial, and caused so little inconvenience, that no treatment was deemed necessary.

January 22, 1888, Dr. Hardee was again consulted; the examination this time showed considerable enlargement of the tonsil, unattended by inflammation, with no pain in deglutition, and the entire disappearance of the ulcer. Dr. Hardee, considering it a case of simple hypertrophy, treated it accordingly, prescribing tincture of iodine to be applied three or four times each day.

The patient was now visited daily until the 26th, no change being observed. On January 28th, the tonsil began to slough, forming a waxy concretion on the surface, and the breath became very offensive. February 1st, the patient had a paroxysm of dyspnoea, and from this time on through the whole course of the disease these paroxysms occurred, especially during sleep, when it became necessary to awaken him.

Dr. Hardee now took the patient to Dr. Hunter McGuire, of Richmond, Virginia, who removed a small piece of the protruding tonsil, and sent it to the writer for diagnosis.

During February, the general condition of the patient remained good, but the appetite gradually failed until February 25th, when there was a respite lasting some days, and giving every indication of recovery.

During the progress of the disease three more such respites occurred, but were less marked than the first. By March the complexion had become cachectic. At no time was there any pain in deglutition, but during the latter stages of the disease the patient was unable to swallow anything but liquids owing to the size of the tumor, which externally was equal to that of the boy's fist.

May 6th, the tumor had involved the surrounding tissues, infiltrating the gums, and spreading across the soft palate to the opposite tonsil, and including it. After the gums became involved, frequent paroxysms of pain were experienced, which, however, were instantly relieved by painting with a five per cent. solution of cocaine. The child died June 4th. No post-mortem being allowed, it was not known whether the tumor gave metastases to the thoracic and abdominal viscera.

A microscopical examination of the small piece of tumor removed by Dr. McGuire revealed the following: Immediately below the epithelial



layer covering the tonsil occur groups of round cells separated by a delicate reticulum of fibrous connective tissue (Fig. 1); the reticulum, besides separating the cells into groups, frequently extends as a fine mesh-

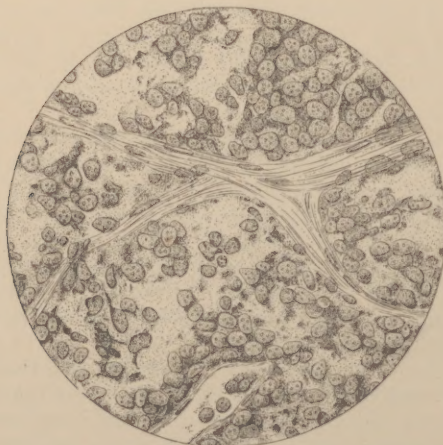
FIG. 1.



Section transverse to surface of mucous membrane of tonsil, showing groups of cells and reticulum. $\times 126$, drawn from photomicrograph.

work between the individual cells. The reticulum is composed of fine connective tissue fibres, with numerous spindle-cell nuclei. The round cells composing groups in the alveoli are double the size of the lymphoid

FIG. 2.



Same section, showing round cells with multiple nuclei, connective tissue reticulum, and bloodvessel without wall. $\times 300$, drawn from photomicrograph.

cells forming the normal structure of the tonsil, and are composed of a cell wall with finely granular protoplasmic contents, and contain from one to four nuclei, the nuclei containing one or more nucleoli. Separat-

ing the fibres of the reticulum, and frequently extending into the cell growths are numerous bloodvessels of varying sizes. The bloodvessels are without walls, and are usually outlined by a single layer of spindle cells (Fig. 2).

In examining the reported cases of sarcoma of the tonsil, the following were found, from which a brief extract is given of the age and sex of patient, and character of the tumor.

Case I.—Patient, male, aged sixty-one years. Lympho-sarcoma of left tonsil, giving general constitutional infection. Moxon, *Trans. Path. Soc. London*, 1869, vol. xx, p. 369.

Case II.—Patient, male, aged seventeen years. Lympho-sarcoma of left tonsil, giving general constitutional infection; death from suffocation. Milani, *Gazetta Medica Italiana-Lombardi*, Milano, 1870, vol. xxx, pp. 17, 18.

Case III.—Patient, male, aged fifty-three years. Lympho-sarcoma of right tonsil. Brown, *Trans. Path. Soc. London*, 1878, vol. xxix.

Case IV.—Patient, male. Sarcoma of right tonsil; character of growth not given. Case of extirpation. Genzmer (Halle), *Verhandl. d. deutsch. Gesellsch. f. Chir.*, vii, 22-26. Berlin, 1879.

Case V.—Patient, male, aged sixty years. Spindle-cell sarcoma of left tonsil, giving general constitutional infection. No death reported. Weinlechner, *Wien. med. Presse*, 1882, xxiii, 1389.

Case VI.—Patient, male, aged sixty years. Spindle-cell sarcoma of left tonsil. Weinlechner, *Allg. Wien. med. Ztg.*, 1882, xxvii, 466.

Case VII.—Patient, female, aged seventy-four years. Round-cell sarcoma of right tonsil; first appearance two months previous to admission to hospital. Death from general constitutional infection. West, *Trans. Path. Soc. London*, 1882, xxxiii, pp. 331-334.

Case VIII.—Patient aged seventeen years. Lympho-sarcoma of left tonsil including pharynx. Death in fifteen months from first appearance.

Case IX.—Patient aged seventeen years. Lympho-sarcoma of left tonsil. Tumor in five months grew to size of goose egg, and extended to right tonsil. Death in one year from first appearance.

Case X.—Patient, male, aged sixty-six years. Lympho-sarcoma of left tonsil. Case of extirpation, with no reported recurrence.

Case XI.—Patient, male, aged twenty-five years. Lympho-sarcoma of left tonsil. Tumor of rapid growth, spreading to right tonsil and abdominal organs.

Case XII.—Patient, male, aged sixty years. Lympho-sarcoma of left tonsil, giving general constitutional infection.

Case XIII.—Patient, female, aged thirty-five years. Lympho-sarcoma of right tonsil. Jardon, 8vo., Bonn, 1883.

Case XIV.—Patient, male, aged seventy-two years. Round-cell sarcoma of right tonsil. First appearance of tumor three months previous to admittance to hospital. Case of extirpation. Pollard, *Trans. Path. Soc. London*, 1886, vol. xxxvii, p. 221.

Case XV.—Patient, female, aged seventy-four years. Lympho-sarcoma of right tonsil. Death seven months from time of first appearance of tumor. Barker, *Trans. Path. Soc. London*, 1886, vol. xxxvii, p. 223.

Case XVI.—Patient, male, aged seventeen years. Round-cell sarcoma of left tonsil. Death from general constitutional infection eight months from time of first appearance of tumor.

Case XVII.—Patient, male, aged fifty years. Round-cell sarcoma of left tonsil. Croly, *Trans. Academy of Med. in Ireland*, pp. 161-164. Dublin, 1887.

Case XVIII.—Patient, female, aged sixty years. Round-cell sarcoma of left tonsil. Tumor of slow growth; two years' duration. Case of extirpation. Richardson, *Boston Med. and Surg. Journal*, 1888, vol. cxviii. No. 8.